

ABSTRACT OF THE DISCLOSURE

The present invention relates to fractionation improvements. Thus, in a fractionator having a fractionation vessel, a reactor effluent vapors inlet, a vapor feed contacting zone, a baffled contacting section above the vapor feed contacting zone, a tops section above the baffled contacting section, a heavy bottoms liquid hold-up pool section below the vapor feed contacting zone, a bottoms outlet, a bottoms recycle system with a heat exchanger with recycled, cooled bottoms fed back to the fractionation vessel at the heavy bottoms liquid hold-up pool section and above the vapor feed contacting zone, the improvements involve a separate remotely located bottoms liquid hold-up pool vessel for separating bottoms liquid holdup from vapor within the fractionation vessel to obtain a thermal separation and increased fractionation efficiency. The invention also relates to fractionation processes utilizing the aforesaid improvements.